

Listing Of Claims

Claims 1-58 (Canceled)

59. (new) An electronic assembly comprising:
a substrate comprising a plurality of contacts;
a component on the substrate comprising a plurality of external contacts in electrical communication with the contacts and a polymer layer substantially surrounding and adhering to the external contacts; and
an underfill layer between the substrate and the component.

60. (new) The electronic assembly of claim 59 wherein the polymer layer has a thickness approximately equal to one fourth to one half a height of the external contacts.

61. (new) The electronic assembly of claim 59 wherein the external contacts comprises an element selected from the group consisting of contact balls, contact bumps, and contact columns.

62. (new) The electronic assembly of claim 59 wherein the component comprises an element selected from the group consisting of semiconductor packages, semiconductor dice, semiconductor wafers, chip scale packages and BGA devices.

63. (new) The electronic assembly of claim 59 wherein the polymer layer comprises a material selected from the group consisting of polyimide, silicone, epoxy, and resist.

64. (new) An electronic assembly comprising:
a substrate comprising a plurality of contacts;
a component on the substrate comprising a plurality of external contacts in electrical communication with the contacts and a plurality of polymer rings substantially surrounding and adhering to the external contacts; and
an underfill layer between the substrate and the component.

65. (new) The electronic assembly of claim 64 wherein the polymer rings have a thickness approximately equal to one fourth to one half a height of the external contacts.

66. (new) The electronic assembly of claim 64 wherein the external contacts comprises an element selected from the group consisting of contact balls, contact bumps, and contact columns.

67. (new) The electronic assembly of claim 64 wherein the component comprises an element selected from the group consisting of semiconductor packages, semiconductor dice, semiconductor wafers, chip scale packages and BGA devices.

68. (new) The electronic assembly of claim 64 wherein the polymer rings comprise a material selected from the group consisting of polyimide, silicone, epoxy, and resist.

69. (new) An electronic assembly comprising
a substrate comprising a plurality of contacts;
a component on the substrate comprising a plurality of pads, a plurality of external contacts comprising first portions bonded to pads, and second portions bonded to the contacts, and a polymer layer substantially surrounding and

adhering to the first portions leaving a gap between the component and the substrate; and
an underfill layer in the gap.

70. (new) The electronic assembly of claim 69 wherein the polymer layer has a thickness of about 0.002 inches to 0.025 inches.

71. (new) The electronic assembly of claim 69 wherein the polymer layer comprises a blanket deposited layer.

72. (new) The electronic assembly of claim 69 wherein the polymer layer comprises a plurality of separate polymer rings, each ring surrounding an external contact.

73. (new) The electronic assembly of claim 69 wherein the polymer layer comprises a material selected from the group consisting of polyimide, silicone, epoxy, and resist.

74. (new) The electronic assembly of claim 69 wherein the external contacts comprise balls, bumps or columns in a grid array.

75. (new) The electronic assembly of claim 69 wherein the external contacts comprise balls or bumps on a polymer tape.

76. (new) The electronic assembly of claim 69 wherein the component comprises an element selected from the group consisting of semiconductor packages, semiconductor dice, semiconductor wafers, semiconductor packages and BGA devices.

77. (new) A method for fabricating a semiconductor component comprising:

providing a substrate;

forming a plurality of external contacts on the substrate comprising base portions and tip portions and having a height on the substrate;

spin coating a resilient polymer material on the substrate substantially surrounding and adhering to the base portions;

controlling the spin coating step such that the polymer material has a thickness on the substrate of less than the height and the tip portions remain exposed; and

curing the polymer material to form a polymer support layer.

78. (new) The method of claim 77 wherein the external contacts comprise balls, bumps or columns in a grid array.

79. (new) The method of claim 77 wherein the polymer material has a thickness approximately equal to one fourth to one half a height of the external contacts.

80. (new) The method of claim 77 further comprising bonding the external contacts to a support substrate and forming an underfill layer between the substrate and the support substrate.